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*IN THE UNITED STATES PATENT AND TRADEMARK OFFICE*

Applicant(s)	:	Dwight D. Smith
Application No.	:	10/757,146
Filed	:	01/14/2004
Title	:	APPARATUS FOR RETENTION OF BATTERY IN CHARGER
Group/Art Unit	:	2838
Examiner	:	Johali A. Torres Ruiz
Docket No.	:	18133

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPEAL BRIEF**

Sir:

This is an appeal following the Final Rejection which was mailed on February 4, 2009. A Pre-Appeal Brief Request for Review was filed with a Notice of Appeal on May 27, 2009. The Panel Decision was issued on June 24, 2009, and the decision was to proceed to the Board of Patent Appeals and Interferences. The Panel Decision indicates that the status of the claims is as follows: Claims 1 and 10-12 are rejected; claims 13 and 15-23 are allowed; and claims 3-9 are objected to. Pending claims 1, 3-13 and 15-23 are provided in the attached Claims Appendix.

### **I. Real Party in Interest**

The real party in interest is Harris Corporation, whose address is Harris Corporation Headquarters, 1025 West NASA Boulevard Melbourne, Florida 32919.

### **II. Related Appeals and Interferences**

There are no other appeals or interferences known to Appellant, the Appellant's legal representative or assigns which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **III. Status of Claims**

Allowed claims:	13 and 15-23
Claims objected to:	3-9
Claims rejected:	1 and 10-12
Claims cancelled:	2 and 14
Claims appealed:	1 and 10-12

### **IV. Status of Amendments**

No amendments were made subsequent to the Final Rejection.

### **V. Summary of Claimed Subject Matter**

The following explanation of the subject matter defined in each of the independent claims is provided with reference to page, paragraph, and line numbers in the specification, and the drawings by reference characters as required by §41.37(c)(1)(v). These references are made to a specific embodiment(s) disclosed in the application and do not limit the scope of the independent claims to the specific embodiment(s) and should not necessarily be considered to be exhaustive.

The subject matter of claim 1 relates to battery charging unit (2, see ¶0023, Figure 1) profiled for installation in a vehicle. The charging unit (2) has an outer casing (4, see ¶0023, Figure 1), an inner sleeve (6, see ¶0023, Figure 1) which provides a cavity (8, see ¶0023, Figure 1) for receiving the battery. A locking assembly (10, see ¶0023, Figure 1) locks the battery in the cavity. Electrodes project through openings (38, see ¶0025, Figures 3-4) for charging the battery. The battery charging unit further comprises a cam assembly (64, see ¶¶0027-0031, Figures 4-5). A gripping member (68, see ¶0029, Figures 4-5) is operatively connected to the

cam assembly. An opening (34, see ¶0025, Figure 4) allows access to cavity (8) from an outside thereof. The gripping member is movable transversely into and out of the housing opening by operation of the cam assembly, between a locked and unlocked position (see ¶0035, Figures 10-11). The gripping member is forced transversely into the battery in the locked position for frictionally gripping a battery placed within the cavity (see ¶¶0029-0032, Figures 5-10).

The subject matter of claim 10 relates to a battery charging unit where the battery receiving cavity is profiled to receive a battery alone, or a battery connected to its hand-held appliance (see ¶ 0023).

The subject matter of claim 11 relates to a battery charging unit where the cavity includes guides along the insertion axis of the cavity for holding the battery alone (32, see ¶ 0025, Figure 3).

The subject matter of claim 12 relates to a battery charging unit where the guides are comprised of guide grooves along the insertion axis of the cavity, and are profiled to receive ribs along an exterior of a battery. (see ¶ 0035).

## **VI. Ground of Rejection to be Reviewed on Appeal**

The Examiner has rejected claims 1 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Lee (U.S. Patent 5,844,401) in combination with Wulff, et al. (U.S. Patent 7,299,373). The Examiner has rejected claims 11 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Lee in combination with Wulff, et al. and further in view of Taylor, et al (US Patent 5,262,710).

## **VII. Arguments**

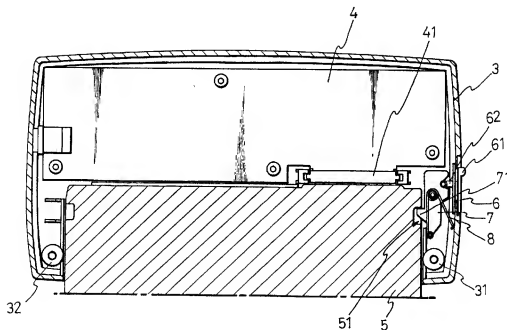
### ***Claim 1 is Patentable Over the Combination of Lee and Wulff***

Lee shows a charging device as shown in Figures 3A and 3B, which may receive a battery 5 in order to charge the battery. The battery charging unit includes a locking member 7 which operates under the influence of a spring 8. The locking member 7 pivots about a point between the positions shown in Figures 3A and 3B. The battery charger includes a sliding part 6 having a projection 62 which is received in a projection groove 72 such that when the sliding part 6 is moved in the direction of the arrow (Figure 3B), the "projection groove 72 of locking

member 7 makes contact with and cams with projection 62 of sliding part 6." This causes the locking member to rotate to the open position shown in Figure 3B. (Column 3, lines 50-51).

Lee does not cam the locking member into position. Rather, the locking member 7 is spring loaded from the position shown in Figure 3B to the position shown in Figure 3A where a locking projection 71 is received in a locking groove 51 of the battery. Lee does not frictionally engage the battery to retain the battery in place. Lee's latch is shown below where locking projection 71 is positioned within locking groove 51. Lee himself indicates in Column 4, lines 10-12 that "[t]he battery is fixed to the charging device by engaging the locking projection 71 and the locking groove 51."

**FIG. 3A**



The Examiner, in a non-final Office Action dated July 28, 2008, rejected claims 1 and 10 under 35 U.S.C. § 103(a) as being obvious over Lee (U.S. Patent 5,844,401) in combination with Wulff, et al. (U.S. Patent 7,299,373). The Examiner objected to claims 3-9 and 14-21. Applicants responded on October 23, 2008 and amended claims 1 and 13. In claim 1, Applicants revised claim 1 to require the underlined language as follows:

a gripping member operatively connected to said cam assembly, and movable transversely into and out of said housing opening by operation of said cam assembly, between a locked and unlocked position, the gripping member being forced transversely into the battery in the locked position for frictionally gripping a battery placed within said cavity.

As for claim 13, Applicants added the objected to claim 14 into the body of claim 13.

The examiner replied on February 4, 2009 finally rejecting claims 1 and 10-12, allowing claims 13 and 15-23 and objecting to claims 3-9. Applicants filed a response After Final, but the Examiner maintained her position.

Applicants believe that the Examiner has mischaracterized the teachings of Lee, U.S. Patent No. 5,844,401. As mentioned above, Lee shows a charging device as shown in Figures 3A and 3B, which may receive a battery 5 in order to charge the battery. The battery charging unit includes a locking member 7 which operates under the influence of a spring 8 and the locking member 7 pivots about a point between the positions shown in Figures 3A and 3B.

As noted by the Examiner, Lee does not cam the locking member into position. Rather, the locking member 7 is spring loaded from the position shown in Figure 3B to the position shown in Figure 3A where a locking projection 71 is received in a locking groove 51 of the battery.

Due to this shortcoming, the Examiner has found a reference Wulff, which shows a first unit 12 having a battery housing 14 including a multi-stage release assembly for detaching battery 10 in a controlled manner. The first catch and latch mechanism includes a pair of buttons 20 which are made from the same material as the housing and further include a flex spring sheet mechanism (not shown) which is attached to an interior of the battery housing. The flex spring sheet mechanism is intended to engage a projection on the battery. The specification quoted by the Examiner is that the "buttons 20 can also include cams or wheels rotating on a shaft, at their ends that can deflect the flex spring sheet causing the release or engagement of the projection on the battery unit 10". However, Wulff does not even show this mechanism.

In the present disclosure, Applicants do not require or utilize projections on the battery housing or the device itself for retention within the battery charger. Rather, the gripping member itself is moved transversely into the battery receiving area or opening and a gripping member is

cammed into place and is frictionally held by the friction member 102. Applicants believe that a combination of Lee and Wulff would not suggest a cam for moving a gripping member into frictional engagement as claimed.

In response to this argument, the Examiner indicates that Applicants cannot argue references independently, when the rejection is based upon a combination. However, Applicants believe that even if Lee and Wulff were combinable, the combination does not teach the claimed invention of claim 1. The examiner's response in the Advisory Action (Page 2) was that "when gripping member (71) is in contact with battery element (51) there is a resistance of motion that grips the battery in place caused by the friction in both elements."

Applicants again believe that this is not just a mischaracterization of the Lee reference, but also of the very mechanics by which Lee operates. Lee's latch operates by the use of abutting latches, but it does not have a frictional retaining force as suggested by the Examiner.

As the Examiner has failed to show a reference or a combination of references showing a gripping member moving transversely into the housing opening and a gripping member for frictionally gripping a battery placed within the cavity, Applicants believe that claim 1 is patentably distinct from the combination of Lee and Wulff. As neither Lee nor Wulff shows such a structure, this rejection should be overturned.

Applicants believe that the combination of Lee and Wulff, even if combinable, do not teach Applicants claimed invention. More particularly, Applicants believe that the Lee reference cannot be used for teaching a gripping member operatively connected to a cam assembly, which is movable transversely into and out of the housing opening by operation of the cam assembly, between a locked and unlocked position, where the gripping member is forced transversely into the battery in the locked position for frictionally gripping a battery placed within the cavity.

Alternatively, Applicants believe that the combination of Lee and Wulff are not properly combinable.

The Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.* issued by the Patent Office preclude the use of such conclusory statements in support of obviousness rejections. The Examination Guidelines state:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn* stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Teleflex Inc. v. KSR Int'l Co.*, 127 S.Ct. 1727, 1741.

Appellants believe that the Examiner has not provided articulated reasoning for the combination of Lee and Wulff. As for the combination, the examination merely indicates that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Wulff in the device of Lee to have released or engaged a battery by use of a cam or wheel rotating on a shaft", (see Final Rejection, ¶10). Applicants believe this is not articulated reasoning, but rather a conclusory statement. This is particularly true when Wulff does not even show the feature that the Examiner has combined for the teaching.

For at least these reasons, Appellants submit that claim 1 is in condition for allowance. Such action is respectfully requested.

**Claim 10 is Patentable Over the Combination of Lee and Wulff**

Claim 10 depends from claim 1, and includes the further limitation that the battery receiving cavity is profiled to receive a battery alone, or a battery connected to its hand-held appliance. None of the references show this alternative.

For at least these additional reasons, Appellants submit that dependent claim 10 is patentable over the combination of Lee and Wulff. Accordingly, Appellants submit that dependent claim 10 is in condition for allowance. Such action is respectfully requested.

**Claim 11 is Patentable Over the Combination of Lee, Wulff and Taylor**

Claim 11 depends from claim 8 and includes the further limitation that the cavity includes guides along the insertion axis of the cavity for holding the battery alone. The Examiner indicated that while Lee and Wulff do not explicitly disclose guides, that Taylor shows guides and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Taylor in the device of Lee to have guided a battery to a charging position (see Final Rejection, ¶13). Applicants believe that these are mere conclusory

statements without an articulated reasoning to support the conclusion of obviousness as required by KSR as illustrated above.

For at least these additional reasons, Appellants submit that claim 11 patentably defines the invention over a combination of Lee, Wulff and Taylor. Accordingly, Appellants submit that dependent claim 11 is in condition for allowance.

**Claim 12 is Patentable Over the Combination of Lee, Wulff and Taylor**

Claim 12 depends from claim 11, and includes the further limitation that the guides are comprised of guide grooves along the insertion axis of the cavity, and are profiled to receive ribs along an exterior of a battery.

With regard to claim 12, the Examiner admits that Lee does not expressly disclose this limitation, but simply indicates that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Taylor in the device of Lee to have guided a battery to a charging position (see Final Rejection, ¶14). Applicants believe that these are mere conclusory statements without an articulated reasoning to support the conclusion of obviousness as required by KSR as illustrated above.

For at least these additional reasons, Appellants submit that claim 12 patentably defines the invention over the combination of Lee, Wulff and Taylor. Accordingly, Appellants submit that dependent claim 12 is in condition for allowance.



### **VIII. Conclusion**

In view of the above, Appellant respectfully submits that the present application is in condition for allowance and respectfully request the Board of Appeals to direct the Examiner to withdraw the Final Action and issue a Notice of Allowance.

Respectfully submitted,

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## **CLAIMS APPENDIX**

### **List of Claims**

1. (Previously Amended) A battery charger assembly, comprising:
  - a housing having a battery receiving cavity, said cavity being profiled to receive at least a battery therein, said housing further comprising an opening through said housing and into said cavity;
  - electrodes for contacting contacts on the battery for charging the battery;
  - a cam assembly; and
  - a gripping member operatively connected to said cam assembly, and movable transversely into and out of said housing opening by operation of said cam assembly, between a locked and unlocked position, the gripping member being forced transversely into the battery in the locked position for frictionally gripping a battery placed within said cavity.
2. (Cancelled).
3. (Previously Amended) The battery charger assembly of claim 1, wherein said gripping member is comprised of a gripper portion attached to an insert.
4. (Original) The battery charger assembly of claim 3, wherein said cam assembly is comprised of a rotatable cam which operates within a follower groove in said insert.
5. (Original) The battery charger assembly of claim 3, wherein said gripper member is a rubber-like material molded to a plastic insert.
6. (Original) The battery charger assembly of claim 5, wherein said gripper member is substantially U-shaped, with leg portions of the U flanking said insert, and the closed end of the U providing the gripping function.
7. (Original) The battery charger assembly of claim 6, wherein the leg portions of gripper member are fixed to the housing portion, and the movement of the cam stretches the remainder of the gripper member.

8. (Original) The battery charger assembly of claim 4, wherein said rotatable cam and said follower groove are contoured for a nested position when in the unlocked position.

9. (Original) The battery charger assembly of claim 4, wherein said rotatable cam and said follower groove are contoured for a detented position when in the locked position.

10. (Original) The battery charger assembly of claim 1, wherein said battery receiving cavity is profiled to receive a battery alone, or a battery connected to its hand-held appliance.

11. (Original) The battery charger assembly of claim 10, wherein said cavity includes guides along the insertion axis of the cavity for holding the battery alone.

12. (Original) The battery charger assembly of claim 11, wherein said guides are comprised of guide grooves along the insertion axis of the cavity, and are profiled to receive ribs along an exterior of a battery.

13. (Previously Amended) A battery charger assembly, comprising:  
a housing having a battery receiving cavity, said cavity being profiled to receive a battery therein alone, or a battery and its appliance therein, said housing further comprising an opening though said housing and into said cavity;  
electrodes for contacting contacts on the battery for charging the battery; and  
a cam operated gripping member, comprised of a gripper portion attached to an insert, movable transversely into and out of said housing opening under the influence of said cam, between a locked and unlocked position, for gripping a battery placed within said cavity.

14. (Cancelled).

15. (Original) The battery charger assembly of claim 14, wherein said cam operated gripping assembly is comprised of a rotatable cam which operates within a follower groove in said insert.

16. (Original) The battery charger assembly of claim 14, wherein said gripper member is a rubber-like material molded to a plastic insert.

17. (Original) The battery charger assembly of claim 16, wherein said gripper member is substantially U-shaped, with leg portions of the U flanking said insert, and the closed end of the U providing the gripping function.

18. (Original) The battery charger assembly of claim 17, wherein the leg portions of gripper member are fixed to the housing portion, and the movement of the cam stretches the remainder of the gripper member.

19. (Original) The battery charger assembly of claim 16, wherein said rotatable cam and said follower groove are contoured for a nested position when in the unlocked position.

20. (Original) The battery charger assembly of claim 16, wherein said rotatable cam and said follower groove are contoured for a detented position when in the locked position.

21. (Original) The battery charger assembly of claim 15, wherein said cam member is operated by a shaft which is connected to said cam member, and extends through to an exterior of said housing.

22. (Original) The battery charger assembly of claim 13, wherein said cavity includes guides along the insertion axis of the cavity for holding the battery alone.

23. (Original) The battery charger assembly of claim 22, wherein said guides are comprised of guide grooves along the insertion axis of the cavity, and are profiled to receive ribs along an exterior of a battery.

**EVIDENCE APPENDIX**

**NONE**

**RELATED PROCEEDINGS APPENDIX**